

Long Point will Heal...
Continued

Graham Giese, physical oceanographer at the Provincetown Center for Coastal Studies, said the stakes look like remains of some kind of dike. He said the cut in the area has probably been opened and closed a number of times.

Giese said the tidal inlet that has formed inland of the cut is a coastal feature balanced by two opposing forces. He said wave energy moves sand along the shoreline and tends to close the inlet. The closing action is opposed by the force of the tidal current flowing through the opening of the inlet.

The force of the current depends on the volume of water moving through the inlet, the area of the basin inside the inlet and the tidal range in the area, Giese said.

The waves narrow the cut, which results in a faster flow of current, Giese said. The faster current then widens the current again, creating a balance of forces.

In order to determine when and if the cut will close itself, Giese said it is necessary to evaluate the volume of the two opposing forces. This means measuring the volume of sand flowing and the volume of water going into and out of the inlet.

But Giese said this is hard to calculate because the basin is not a firm boundary for water. The West End dike, which composes one side of the tidal basin, is permeable. This means that all water going in and out of the system does not go through the inlet, making calculations very difficult.

At low tide a 15-foot current flows briskly out to sea. It is only a few inches deep. A new delta is forming on the oceanside of the cut where the water empties into the ocean.

Seashore Ranger Tom Bradley said he is skeptical about man doing anything to change the course of nature in the area. "I worked at Cape Hatteras when they spent millions of dollars to protect some oceanfront hotels," he said. "It didn't work."

The Seashore is investigating two other problems caused by the flood. A Boston engineer has inspected the washed-out road to Herring Cove Beach and estimated repair costs at \$10,000. Seashore Supt. Lawrence Hadley said repairs will be made as soon as money is found for the project. The road has been closed since the storm.

Hadley said it would cost about \$10,000 to repair the break in the Hatches Harbor dike. The dike broke during the flood and water now threatens the Provincetown Airport. Hadley said the Seashore has written the state Department of Public Works to clarify responsibility for maintenance of the dike.



Long Point Lighthouse - 1910